

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended) ~~Process~~ A process for the production of oils starting from a hydrocarbon-containing feedstock that has a sulfur content of less than 1000 ppm by weight, a nitrogen content of less than 200 ppm by weight, a metal content of less than 50 ppm by weight, whereby said process comprises the following successive stages after an optional hydrotreatment of the feedstock:

(a) converting pretreatment of the feedstock to effect hydroisomerization and hydrocracking reactions, whereby said stage takes place at a temperature of 200-500°C, under a pressure of 5-25 MPa, with a volumetric flow rate of 0.1- 5 h⁻¹, in the presence of hydrogen, and in the presence of a bifunctional catalyst that contains at least one noble metal of group VIII that is deposited on a non-zeolitic silica-alumina-based substrate that has a silica (SiO₂) content by mass that is more than 10% by weight and less than or equal to 80% by weight, whereby said catalyst has the following characteristics:

- a mean pore diameter, measured by mercury porosimetry, encompassed between 20 and 140 Å,
- a total pore volume, measured by mercury porosimetry, encompassed between 0.1 ml/g and 0.6 ml/g,
- a total pore volume, measured by nitrogen porosimetry, encompassed between 0.1 ml/g and 0.6 ml/g,
- a BET specific surface area encompassed between 100 and 500 m²/g,
- a pore volume, measured by mercury porosimetry, encompassed in the pores with diameters of more than 140 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, encompassed in the pores with diameters of more than 160 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, encompassed in the pores with diameters of more than 200 Å, of less than 0.1 ml/g,

- a pore volume, measured by mercury porosimetry, encompassed in the pores with diameters of more than 500 Å, of less than 0.01 ml/g,
- an X ray diffraction diagram that contains at least the main lines that are characteristic of at least one of the transition aluminas contained in the group that consists of the alpha, rho, chi, eta, gamma, kappa, theta and delta aluminas,
- a pore distribution, such that the ratio between volume V2, measured by mercury porosimetry, encompassed between $D_{\text{mean}} - 30 \text{ Å}$ and $D_{\text{mean}} + 30 \text{ Å}$, to the total mercury volume is more than 0.6, that volume V3, measured by mercury porosimetry, encompassed in the pores with diameters of more than $D_{\text{mean}} + 30 \text{ Å}$, is less than 0.1 ml/g, that volume V6, measured by mercury porosimetry, encompassed in the pores with diameters of more than $D_{\text{mean}} + 15 \text{ Å}$, is less than 0.2 ml/g,

(b) catalytic dewaxing of at least a portion of ~~the effluent that is obtained~~ resultant effluent from stage a), carried out at a temperature of 200-500°C, under a pressure of 1-25 MPa, with an hourly volumetric flow rate of 0.05-50h⁻¹, in the presence of 50-2000 liters of hydrogen/liter of effluent that enters stage b and in the presence of a catalyst that comprises at least one hydro-dehydrogenating element and at least one molecular sieve.

Claim 2 (currently amended) ~~Process A process~~ A process according to claim 1 ~~that uses a catalyst in which the~~ wherein the converting pretreatment catalyst comprise proportion of the octahedral Al_{VI} determined by analysis of the NMR MAS spectra of the solid of ²⁷Al is of greater than 50%.

Claim 3 (currently amended) ~~Process A process~~ A process according to claim 1, in which the noble metal of the converting pretreatment catalyst is platinum and/or palladium.

Claim 4 (currently amended) ~~Process A process~~ A process according to claim 1, in which the pretreatment catalyst is such that the packing density is greater than 0.85 g/cm³.

Claim 5 (currently amended) ~~Process A process~~ A process according to claim 1, in which the entire effluent of converting pretreatment stage (a) is treated in dewaxing stage (b).

Claim 6 (currently amended) ~~Process~~ A process according to claim 1, in which the effluent that is obtained from stage (a) is distilled so as to separate the light gases and at least one residue that contains the compounds with a boiling point that is higher than at least 340°C, ~~whereby~~ and said residue is subjected to stage (b).

Claim 7 (currently amended) ~~Process~~ A process according to claim 1, in which the effluent that is obtained from stage (b) is ~~distilled~~ subjected to a distillation stage so as to separate an oil that contains the compounds with a boiling point that is higher than at least 340°C.

Claim 8 (currently amended) ~~Process~~ A process according to claim 7, ~~comprising~~ wherein said distillation comprises an atmospheric distillation followed by a vacuum distillation of the atmospheric residue.

Claim 9 (currently amended) ~~Process~~ A process according to claim 1, in which the feedstock that is subjected to stage (a) previously underwent a said hydrotreatment and then optionally a separation of water, ammonia, and hydrogen sulfide.

Claim 10 (currently amended) ~~Process~~ A process according to claim 1, in which the catalyst of stage (b) is based on zeolite that is selected from the group that is formed by TON-structural-type zeolites (theta-1, ISI-1, ZSM-22, KZ-2, and NU-10), and the zeolites ZSM-48, ZBM-30, EU-2, EU-11, ferrierite, EU-1 and EU-13.

Claim 11 (currently amended) ~~Process~~ A process according to claim 1, in which the effluent that is obtained from stage (b) is subjected to a hydrofinishing stage before being distilled.

Claim 12 (currently amended) ~~Process~~ A process according to claim 1, in which the treated hydrocarbon-containing feedstock contains at least 20% by volume of compounds that boil above 340°C.

Claim 13 (currently amended) ~~Process~~ A process according to claim 1, in which the ~~treated~~ hydrocarbon-containing feedstock is selected from the group that is formed by vacuum distillates that are obtained from the direct distillation of the crude, ~~the~~ vacuum distillates that are obtained from conversion units, ~~the~~ vacuum distillates that are obtained from units for aromatic compound extraction, ~~the~~ vacuum distillates that are obtained from desulfurization or hydroconversion of atmospheric residues and/or vacuum residues, deasphalted oils, hydrocracking residues, vacuum distillates that have undergone a hydrotreating stage, lubricating oil bases, polyalpha-olefins with a high pour point or any mixture of said feedstocks.

Claim 14 (currently amended) ~~Process~~ A process according to claim 1 ~~that use for a~~ wherein said converting pretreatment catalyst a comprises silica-alumina-based non-zeolitic substrate ~~that has~~ having the following characteristics:

- a content by mass of silica (SiO_2) of more than 10% by weight and less than or equal to 80% by weight of silica (SiO_2),
- a mean pore diameter, measured by mercury porosimetry, encompassed between 20 and 140 Å,
- a total pore volume, measured by mercury porosimetry, encompassed between 0.1 ml/g and 0.6 ml/g,
- a total pore volume, measured by nitrogen porosimetry, encompassed between 0.1 ml/g and 0.6 ml/g,
- a BET specific surface area of between 150 and 500 m^2/g ,
- a pore volume, measured by mercury porosimetry, encompassed in the pores with diameters of more than 140 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, encompassed in the pores with diameters of more than 160 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, encompassed in the pores with diameters of more than 200 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, encompassed in the pores with diameters of more than 500 Å, of less than 0.01 ml/g,

- an X ray diffraction diagram that contains at least the main lines that are characteristic of at least one of the transition aluminas contained in the group that consists of the rho, chi, eta, gamma, kappa, theta and delta aluminas,
- a pore distribution, such that the ratio between volume V2, measured by mercury porosimetry, encompassed between $D_{\text{mean}} - 30 \text{ \AA}$ and $D_{\text{mean}} + 30 \text{ \AA}$, to the total mercury volume is more than 0.6, that volume V3, measured by mercury porosimetry, encompassed in the pores with diameters of more than $D_{\text{mean}} + 30 \text{ \AA}$, is less than 0.1 ml/g, that volume V6, measured by mercury porosimetry, encompassed in the pores with diameters of more than $D_{\text{mean}} + 15 \text{ \AA}$, is less than 0.2 ml/g.

Claim 15 (currently amended) ~~Process~~ A process according to claim 14 ~~that uses a~~ said non-zeolitic catalyst substrate ~~such that it~~ comprises at least two silico-aluminum zones that have Si/Al ratios that are less than or greater than the overall Si/Al ratio that is determined by X ray fluorescence.

Claim 16 (currently amended) ~~Process~~ A process according to claim 14 ~~that uses a~~ wherein said non-zeolitic catalyst substrate ~~such that it~~ comprises a single silico-aluminum zone ~~that has~~ having an Si/Al ratio that is equal to the overall Si/Al ratio that is determined by X fluorescence and is less than 2.3.

Claim 17 (currently amended) ~~Process~~ A process according to claim 1 ~~that uses a~~ wherein said non-zeolitic catalyst substrate ~~such that the~~ has packing density, after calcination, is of higher than 0.65 g/cm^3 .

Claim 18 (currently amended) ~~Process~~ A process according to claim 1 ~~that uses a~~ wherein said non-zeolitic catalyst substrate ~~whose~~ has an acidity that is measured by IR tracking of the thermodesorption of the pyridine is such that the B/L ratio is between 0.05 and 1.